

REMARKS

By this amendment, Applicants have amended claim 1 to include the features of claims 2-4. Support for this amendment can be found, in the specification as filed, for example, at page 2, lines 23 to 28 of the specification and Figures 2 to 4 and claims 2-4. Claim 2 has been amended to include that there is a plurality of support struts, thrusts or annular rings. Support for this amendment can be found, in the specification as filed, for example, at page 2, lines 23 to 28 of the specification and Figures 2 to 4 and claims 2-4. Claims 14 and 23-26 have been amended to provide antecedent basis according to the Examiner's suggestions. Claims 3-5 have been canceled without disclaimer and Applicants reserve the right to pursue these claims in one or more continuation/divisional applications. New claims 31 and 32 have been added that are similar to claims 1 and 2 except they add an embossed or corrugated plate selection to the Markush group as mentioned in claim 2 and page 7 of the specification. These amendments and new claims do not add new matter. Applicants respectfully request entry of these amendments and allowance of the pending claims.

I. Objection

The Examiner objected to claim 5 for not reciting the phrase "inner self-supporting structure". By this amendment, Applicants have canceled claim 5, without disclaimer. Therefore, this objection is now moot.

II. Rejections Under 35 U.S.C. §112 Second Paragraph

Claims 14 and 24-26 are rejected under 35 U.S.C. 112, second paragraph, as allegedly being indefinite. By this amendment, Applicants have amended the claims according to the Examiner's suggestions so that claim 14 recites "at a rear end", claim 24 recites "a front end" and "an axis" and now depends from claim 23; claim 25 recites "a rear end" and "an axis" and now depends from claim 23; and claim 26 recites "a biasing means" and now depends on claim 14. Therefore, these rejections are now moot.

III. Rejections Under 35 U.S.C. §102/103

The Examiner rejected (i) claims 1-4, 14-17, and 23-26 under 35 U.S.C. 102(e) as allegedly being anticipated by U.S. Patent Publication No. US2004/0025540 (Dick); (ii) claims 1-4 and 15-18 under 35 U.S.C. 102(b) as allegedly being anticipated by U.S. Patent No. 3,236,619 (Frye); and (iii) claim 22 under 35 U.S.C. 103(a) as allegedly being unpatentable over Dick in view of U.S. Patent No. 6,595,029 (Dick '029).

With respect to item (iii) of the rejection, Applicants have amended claim 22 to include the features of claims 2-4, which is not part of this aspect of the rejection. Therefore, item (iii) is now moot.

With respect to items (i) and (ii) of the rejection, Applicants respectfully traverse these aspects of the rejections. The claims have been amended to include the features of claims 2-4 and that the self-supporting metal material jacket comprises an outer wall and an inner self-supporting structure, wherein the outer wall comprises a metal material and the inner self-supporting structure is at least one support strut, thrust or annular ring, or combinations thereof, the inner self-supporting structure being made of a metal material substantially similar to the metal material of the outer wall. Applicants respectfully submit that none of the cited prior art references disclose or make obvious these features.

Dick discloses a Danner blow pipe having a peripheral wall comprising an external metal jacket and a ceramic body surrounded by the external metal jacket (See Dick abstract). One of ordinary skill in the art would not consider this a self-supporting metal jacket as claimed.

In Dick, the metal jacket 2 is supported by a ceramic body 3. No further means for reinforcement of the jacket are shown. In addition, the ceramic body of Dick does not form an annular ring 21 as shown in Figure 2 of the current patent application. Rather, the ceramic body of Dick forms a hollow cylinder or hollow cone. Thus, Dick does not disclose and does not make the current claims obvious.

Like Dick, Frye does not anticipate and does not make the current claims obvious. Frye discloses a glass tube forming apparatus. In Frye, the external sleeve 24 is not self-supporting but is carried and held in shape by the intermediate refractory member 21.

This member shows recesses 28 in which a heating element 27 can be placed. These recesses, however, do not (and are incapable of) providing any structural support for sleeve 24. This is in contrast to the current application that discloses the plurality of support struts or annular rings 21 that provide support to the mandrel as shown in Figure 2. In Figure 3, of the current application, a corrugated plate 7 is placed inside the metal jacket 22 in such a way that the corrugations are perpendicular to the longitudinal axis of the mandrel so the annular rings or support struts are formed by the corrugations. This design is not disclosed and is not made obvious by Frye.

Moreover, one of ordinary skill in the art would not combine Dick and Frye the way the Examiner does and even if one of ordinary skill in the art was to combine them they still would not obtain the self-supporting metal jacket as recited in the claims. Accordingly, none of the cited prior art references anticipate and does not make the current claims obvious. Applicants respectfully request that the rejections under 35 U.S.C. §102 and § 103 be reconsidered and withdrawn.

IV. Conclusion

Reconsideration and allowance are respectfully solicited

Applicants hereby request a one-month extension of time under 37 CFR 1.136(a) and authorize the Patent Office to charge Kalow & Springut LLP's credit card for the required fee. No additional fee is believed to be due with respect to filing this amendment. If any additional fees are due, or an overpayment has been made, please charge, or credit, our Deposit Account No. 11-0171 for such sum.

If the Examiner has any questions regarding the present application, the Examiner is cordially invited to contact Applicants' attorney at the telephone number provided below.

Respectfully submitted,

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